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August 18, 2005
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Mr. Henry Chui
California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2737

Subject: Cleanup Plan for two Outdoor sites; a Grounded Rocker Arm adjacent to Building 108B and a Transformer Pad adjacent to Building 142 in Parcel 04-B3 Within Investigation Area C3, Eastern Early Transfer Parcel, Mare Island, Vallejo, California

Dear Mr. Chui:

CH2M HILL prepared this letter in compliance with the requirements in the Consent Agreement (Lennar Mare Island, LLC [LMI] et al. 2001) signed April 16, 2001 between LMI, the City of Vallejo, and the State of California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and according to the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005). The purpose of this letter is to present the cleanup plan for the polychlorinated biphenyl (PCB) site associated with the grounded rocker arm-34 (GRA-34), east of Building 108 and a transformer pad, north of Building 142, located adjacent to Dry Dock 1, within Investigation Area (IA) C3. Figure 1 shows the location of the concrete pad associated with GRA-34 and the transformer pad north of Building 142 at Mare Island.

PCB Site Identification

From conducting visual site surveys, as well as from review of historical records, building closure reports, and databases of electrical equipment, the United States Department of the Navy (Navy) identified PCB sites where equipment containing PCBs were located. PCB spills were documented, or contamination was suspected because of building history or visible stains (Tetra Tech Environmental Management, Inc. [TtEMI] 1998). From visual site surveys, Navy personnel from Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) conducted interim PCB assessments. Following the SSPORTS interim PCB assessments, TtEMI personnel typically collected confirmation samples either to confirm SSPORTS findings that no cleanup was necessary or to determine the effectiveness of the SSPORTS cleanup actions.

Buildings 108 and 142 are located within IA C3, bounded on the West Side by Nimitz Avenue (formerly California Avenue) and by Mare Island Strait on the east. Parcel 04-B3 is located in the Historic Core (SWA Group 2000) within IA C3. Prior to 1874, Parcel 04-3B was vacant land. In 1891, Dry Dock 1 was completed. A variety of small structures were

constructed in the vicinity of Dry Dock No. 1; however, their use and exact location are unknown. Several buildings have been constructed and then demolished through time, but little history exists regarding the purpose of these structures. Building 108 and Building 142 were constructed on Parcel 04-B3 in 1911 and 1983, respectively. Building 108 originally served as a storage facility and supported work spaces and offices for Dry Dock No. 1. Building 142 served as a Nuclear Work and Office Facility for electronic and electrical repairs of equipment on ships in Dry Dock No. 1 and on the Waterfront Berths. Sites 108B Assessment Location (AL)#02 and 142 AL#01 were an electrical substation and former transformer pad, respectively.

Two PCB sites at Building 108B (AL#01 and AL#02) and four PCB sites at Building 142 AL#01, AL#02, AL#03 and AL#04 are listed in the Consent Agreement for the Eastern Early Transfer Parcel at Mare Island (LMI et al. 2001). This letter addresses Building 108B AL#02 (concrete pad for GRA-34) and Building 142 AL#01 (former transformer pad). Because these two concrete pads are adjacent, they are both addressed in this cleanup plan.

PCB Site Closure Process

The *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005) illustrates the process for PCB site closure under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Toxic Substances Control Act (TSCA). Under CERCLA, a no further action (NFA) determination is appropriate at a PCB site if there is no potential source and no PCB contamination present at the site (CH2M HILL 2005). Even if there is a potential source or PCB contamination present in machinery or building materials, NFA under CERCLA is appropriate at a site if there is no release of PCBs to soil or groundwater, nor any visible pathway for migration of PCBs to soil and/or groundwater (CH2M HILL 2005); such sites will be evaluated under TSCA for site closure in accordance with the United States Environmental Protection Agency (USEPA) Consent Agreement/ Final Order (USEPA et al. 2001). If there is a known release to soil or groundwater, then NFA is also appropriate if the detected PCB concentrations in soil or groundwater do not exceed the applicable preliminary remediation goal (PRG), or if results of a site-specific risk evaluation demonstrate that potential risks associated with exposure to residual PCBs are within the risk-management range generally used to determine if cleanup is necessary.

In compliance with this process, Figure 2 provides a flowchart illustrating the PCB site closure process for Building 108B AL#02 and Building 142 AL#01. The following sections provide details on the site history, previous sampling, location and extent of PCB contamination, and the cleanup plan for Building 108B AL#02 and Building 142 AL#01.

Site History

The potential source of PCB contamination at Building 108B AL#02 is the grounded rocker arm oil reservoir that contained PCB concentrations of 3.3 parts per million (ppm). The potential source of PCB contamination at the Building 142 AL#01 transformer pad is

unknown; according to the Public Works Center (PWC), the transformer associated with Building 142 (T-1864) was a Dry Transformer. The maximum PCB concentration detected in concrete at Building 108B AL#02 is 2.4 milligrams per kilogram (mg/kg). PCBs were also detected in an adjacent asphalt surface sample at a concentration of 5.6 mg/kg. The maximum PCB concentration detected in concrete at Building 142 AL#01 is 1.7 mg/kg. PCBs were also detected in an adjacent asphalt sample at a concentration of 1.96 mg/kg. No previous cleanup actions have been performed at these sites.

Summary of Previous Sampling

Table 1 provides a summary of the previous sampling at Building 108B AL#02 and Building 142 AL#01. This table includes the sample numbers, matrix, sample date, and total PCB concentration (the laboratory reporting limit is given when PCBs were not detected). Samples were analyzed for PCBs using USEPA Methods SW8080A or SW8082. Figure 3 shows the previous sample locations at Building 108B AL#01 and Building 142 AL#01. A summary of the previous sampling at this site is provided below.

Building 108B AL#02

As part of the initial assessment at Building 108B AL#02, SSPORTS personnel collected one oil sample (6170-0010) from inside the GRA-34 reservoir in June 1996 (SSPORTS 1996). PCBs were detected in this oil sample at a concentration of 3.3 ppm (SSPORTS 1996). An additional asphalt sample (7125-092) was collected at Building 108B AL#02, adjacent to GRA-34, on May 16, 1997. PCBs were detected in the asphalt sample at a concentration of 2.4 mg/kg.

TtEMI personnel collected two confirmation samples (PC1533 and PC1534) at Building 108B AL#02 in July 1997. Sample PC1533 was collected from a stained area on the concrete pad at the base of GRA-34, and sample PC1534 was collected from a stained asphalt area adjacent to the pad. PCBs were detected in sample PC1533 at a concentration of 0.02 J mg/kg and detected in sample PC1534 at a concentration of 0.2 mg/kg (TtEMI 1998).

SSPORTS collected seven asphalt samples (8-0170 through 8-0176) in June 1998 to determine the extent of the PCB contamination. PCBs were detected in all seven samples ranging in concentration from 1.6 mg/kg to 5.6 mg/kg.

CH2M HILL collected four subsequent samples in October 2002 (B108BCH0550 through B108BCH0553). PCBs were detected in these four samples ranging in concentration from 1.8 mg/kg to 3.5 mg/kg. CH2M HILL collected 10 additional samples in October 2004, B108BCH0554 through B108BCH05563. PCBs were detected in nine of these samples ranging in concentration from 0.31 mg/kg to 1.9 mg/kg, Table 1. PCBs were not detected in sample B108B-0559 greater than the laboratory reporting limit (<0.23 mg/kg).

Building 142 AL#01

As part of the initial assessment at Building 142 AL#01, SSPORTS personnel collected one concrete sample (6170-0019) from the concrete transformer pad north of Building 142 (SSPORTS 1996). PCBs were detected in this concrete sample at a concentration of 1.2 mg/kg (SSPORTS 1996).

TtEMI personnel collected two confirmation samples at Building 142 AL#01 in July 1997. Sample PC1634 was collected from a stained area on the concrete transformer pad, and sample PC1635 was collected from a stained asphalt area adjacent to the concrete pad. PCBs were detected in sample PC1634 at a concentration of 1.7 mg/kg and in sample PC1635 at a concentration of 0.3 J mg/kg (TtEMI 1998).

Location and Extent of Contaminated Area

Building 108B AL#02 and Building 142 AL#01 are adjacent to one another. For this reason, the proposed cleanup area encompasses both of these sites. Figure 3 shows the remaining PCB concentrations at the Building 108B AL#02 and Building 142 AL#01 site. Based on a site visit by CH2M HILL personnel, the concrete pads are surrounded by asphalt pavement and surface soil. PCB concentrations that exceed the industrial PRG of 0.74 mg/kg (USEPA 2004) are present in samples collected from this site.

Cleanup Plan

Figure 4 shows the proposed concrete and soil removal areas. An approximate area of 530 square feet, including concrete and asphalt, will be removed. Soil will be removed from the north, south, east, and west side of the concrete pad adjacent to the concrete removal area. In addition, the rocky base material under the removed concrete will be removed until soil is encountered. Soil from the removal area will be excavated to a depth of 6 inches. The horizontal boundary of the removal action area is the adjacent asphalt pavement. The proposed excavation area is irregularly shaped, with a proposed excavation depth of 6 inches below the pad and any underlying base material. Verification soil samples will be collected in accordance with 40 CFR Part 761, Subpart O. Because of the relatively large size of this excavation, samples will be collected and composited in accordance with 40 CFR, Subpart O, Section 761.289 sub-sections (b)(1)(i). Twelve composite samples will be analyzed for PCBs. Composite areas are defined using a 3-meter by 3-meter grid. Figure 4 identifies the number of discreet samples that will comprise each composite sample. Discreet samples will be evenly spaced collinearly within each grid section.

Following receipt of the analytical data for verification samples and confirmation that the cleanup goal has been attained, certified-clean backfill material will be imported, placed in the excavation area, and compacted in accordance with the requirements of the *Final Soil and Groundwater Management Plan* (CH2M HILL 2001a). The removed concrete pad will not be replaced.

This cleanup action will be performed in accordance with the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005). Sample analysis will be in accordance with the *Quality Assurance Project Plan* (CH2M HILL 2001b) using USEPA Method SW8082. Health and safety will be in accordance with the Health and Safety Plan for PCB Site Sampling and Remediation (Appendix A in the *Draft Polychlorinated Biphenyl Work Plan* (CH2M HILL 2002). Standard operating procedures (SOPs) for the field work and issues regarding site security, site access, permits and notifications, site restoration, and site demobilization were presented in the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005).

PCB waste management will be performed in accordance with CH2M HILL SOP Health, Safety, and the Environment Number 82 (HSE-82). This SOP was provided in the *Draft Polychlorinated Biphenyl Work Plan* (CH2M HILL 2002). Based on the previous sampling performed at this site, PCB-containing wastes generated from this cleanup action will be disposed of off site at a Class II landfill. However, final disposition of the waste will be determined based on the results of waste characterization sampling.

This cleanup action for Building 108B AL#02 and Building 142 AL#01 is scheduled to occur during September 2005. The goal for this cleanup action is to achieve remaining PCB concentrations of less than or equal to 0.74 mg/kg. Excavation will continue until the verification sampling results indicate that this cleanup goal has been achieved.

Conclusions

A cleanup action will be performed at Building 108B AL#01 and Building 142 AL#01 in IA C3 during September 2005. The cleanup action will consist of concrete removal from an approximate 530-square-foot area and soil excavation adjacent to the concrete removal area to a depth extending 6 inches below base the base material. The cleanup goal is to achieve remaining PCB concentrations of less than or equal to the industrial PRG, 0.74 mg/kg (USEPA 2004).

If you have any questions or concern regarding this cleanup plan, please contact Tom Corontzos at 530/229-3227. Please submit your approval of this cleanup plan to me at the above address or via e-mail at jmorris1@CH2M.com within 30 calendar days of receiving this letter.

References

CH2M HILL. 2001a. *Final Soil and Groundwater Management Plan.* November

_____. 2001b. *Quality Assurance Project Plan.* November.

_____. 2002. *Draft Polychlorinated Biphenyl Work Plan.* August 6.

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Sincerely,

CH2M HILL

for Jeffery C. Morris, PC

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Enclosures: Table 1, Figures 1 through 4

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TABLE 1
Previous Samples from Building 108B AL#02 and Building 142 AL#01
PCB Sites, Lennar Mare Island, Vallejo, California

PCB Site Name	Site Description	Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Comments
Building 108B AL#02	GRA-34, east of building	6170-0010	Oil	06/96	3.3 ppm	
		7125-0092	Asphalt	05/16/97	2.4 mg/kg	
		PC1533	Concrete	07/11/97	0.02 J mg/kg	
		PC1534	Asphalt	07/11/97	0.2 mg/kg	
		8-0170	Asphalt	06/05/98	2.8 mg/kg	
		8-0171	Asphalt	06/05/98	1.6 mg/kg	
		8-0172	Asphalt	06/05/98	3.8 mg/kg	
		8-0173	Asphalt	06/05/98	1.8 mg/kg	
		8-0174	Asphalt	06/05/98	1.8 mg/kg	
		8-0175	Asphalt	06/05/98	2.4 mg/kg	Duplicate of sample 8-0174
		8-0176	Asphalt	06/05/98	5.6 mg/kg	
		B108BCH0550-C0	Asphalt	10/10/02	2 mg/kg	
		B108BCH0551-C0	Asphalt	10/10/02	3.5 mg/kg	
		B108BCH0552-C0	Asphalt	10/10/02	1.8 mg/kg	
		B108BCH0553-C0	Asphalt	10/10/02	2 mg/kg	
		B108B-0554	Asphalt	10/14/04	0.68 mg/kg	
		B108B-0555	Asphalt	10/14/04	0.99 mg/kg	
		B108B-0556	Asphalt	10/14/04	1.9 mg/kg	
		B108B-0557	Asphalt	10/14/04	0.25 mg/kg	
		B108B-0558	Asphalt	10/14/04	1.4 mg/kg	
		B108B-0559	Asphalt	10/14/04	< 0.23 mg/kg	
		B108B-0560	Asphalt	10/14/04	0.32 mg/kg	
		B108B-0561	Asphalt	10/14/04	0.41 mg/kg	
		B108B-0562	Asphalt	10/14/04	0.85 mg/kg	

TABLE 1
Previous Samples from Building 108B AL#02 and Building 142 AL#01
PCB Sites, Lennar Mare Island, Vallejo, California

PCB Site Name	Site Description	Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Comments
Building 142 AL#01	Transformer pad, north of building	B108B-0563	Asphalt	10/14/04	0.31 mg/kg	
		6170-0019	concrete	06/19/96	1.2 mg/kg	
		PC1634	concrete	07/11/97	1.7 mg/kg	
		PC1635	asphalt	07/11/97	0.3 J mg/kg	

Notes: Samples with numbers beginning with the letters PC were collected by TtEMI. All other samples were collected by SSPORTS.

AL = Assessment location.
GRA = Grounded rocker arm.
J = Estimated concentration.
ND = Not detected (laboratory reporting limit in parenthesis).
PCB = Polychlorinated biphenyl.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.

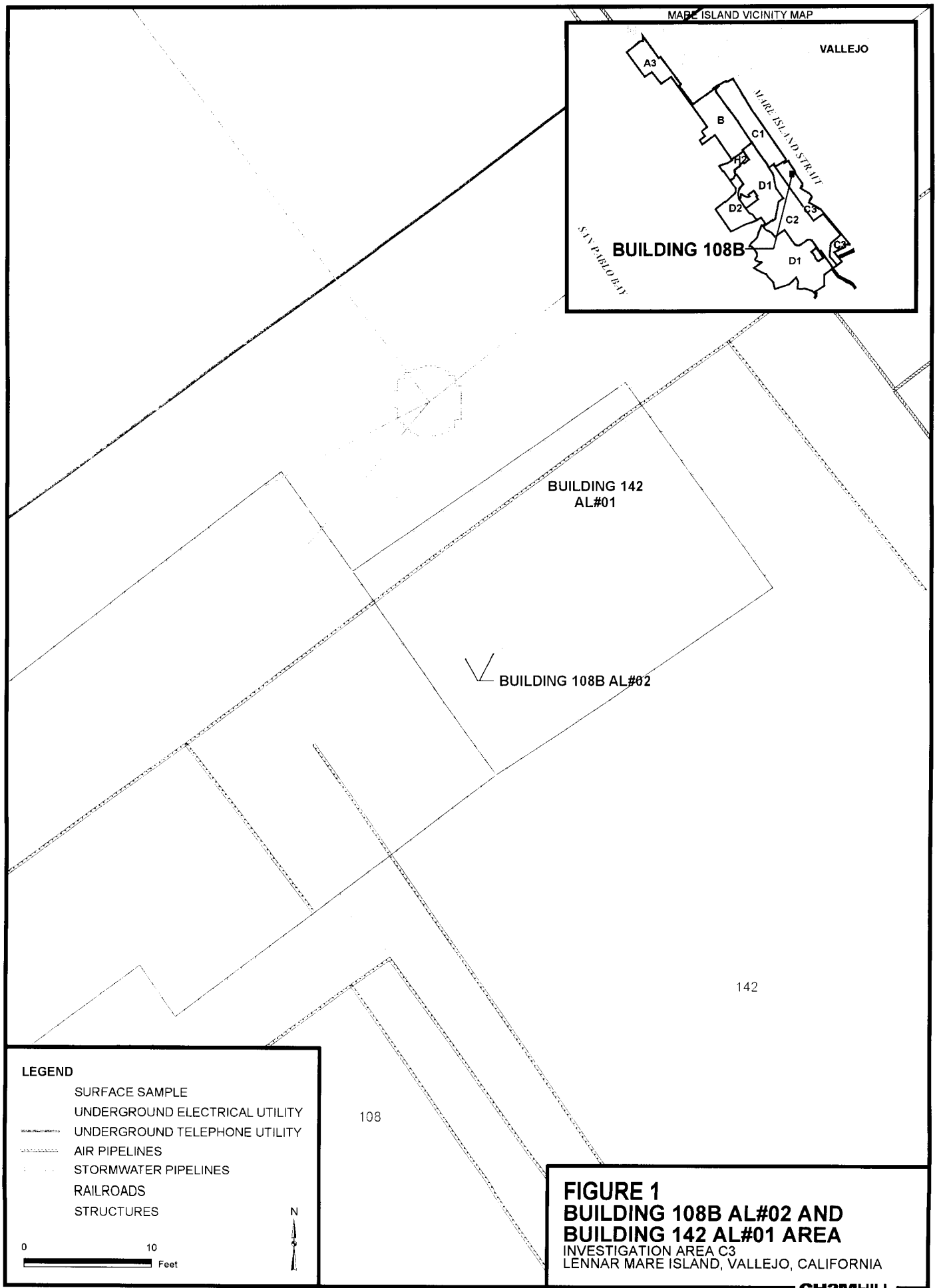

FIGURE 1
BUILDING 108B AL#02 AND BUILDING 142 AL#01 AREA
INVESTIGATION AREA C3
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

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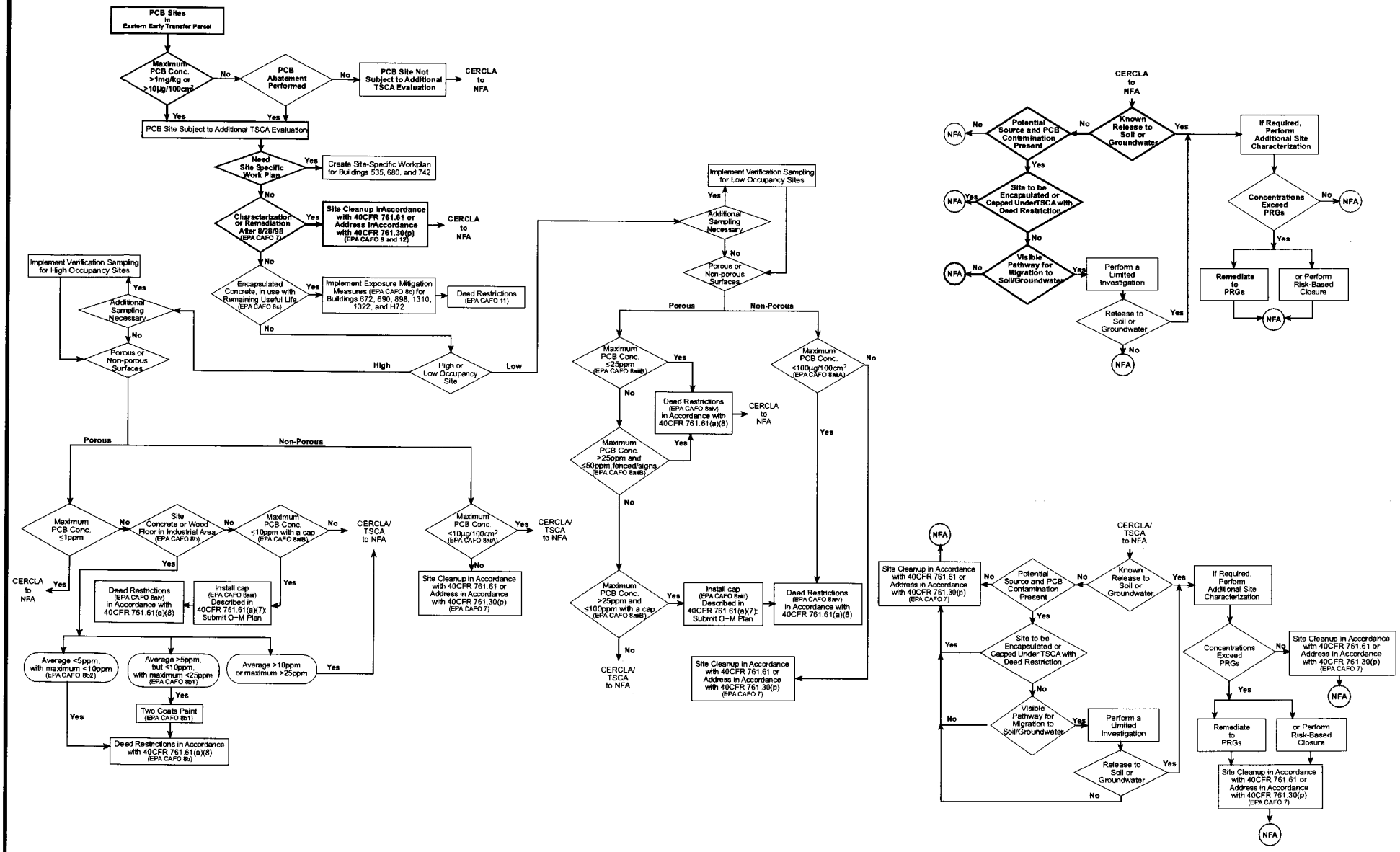

Notes:
EPA CAFO # = EPA Consent Agreement and Final Order paragraph number.

NFA = No further action.

O+M = Operations and Maintenance.

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FIGURE 2
PATH FOR PCB SITE CLOSURE
BUILDING 108B AL#02 AND
BUILDING 142 AL#01
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

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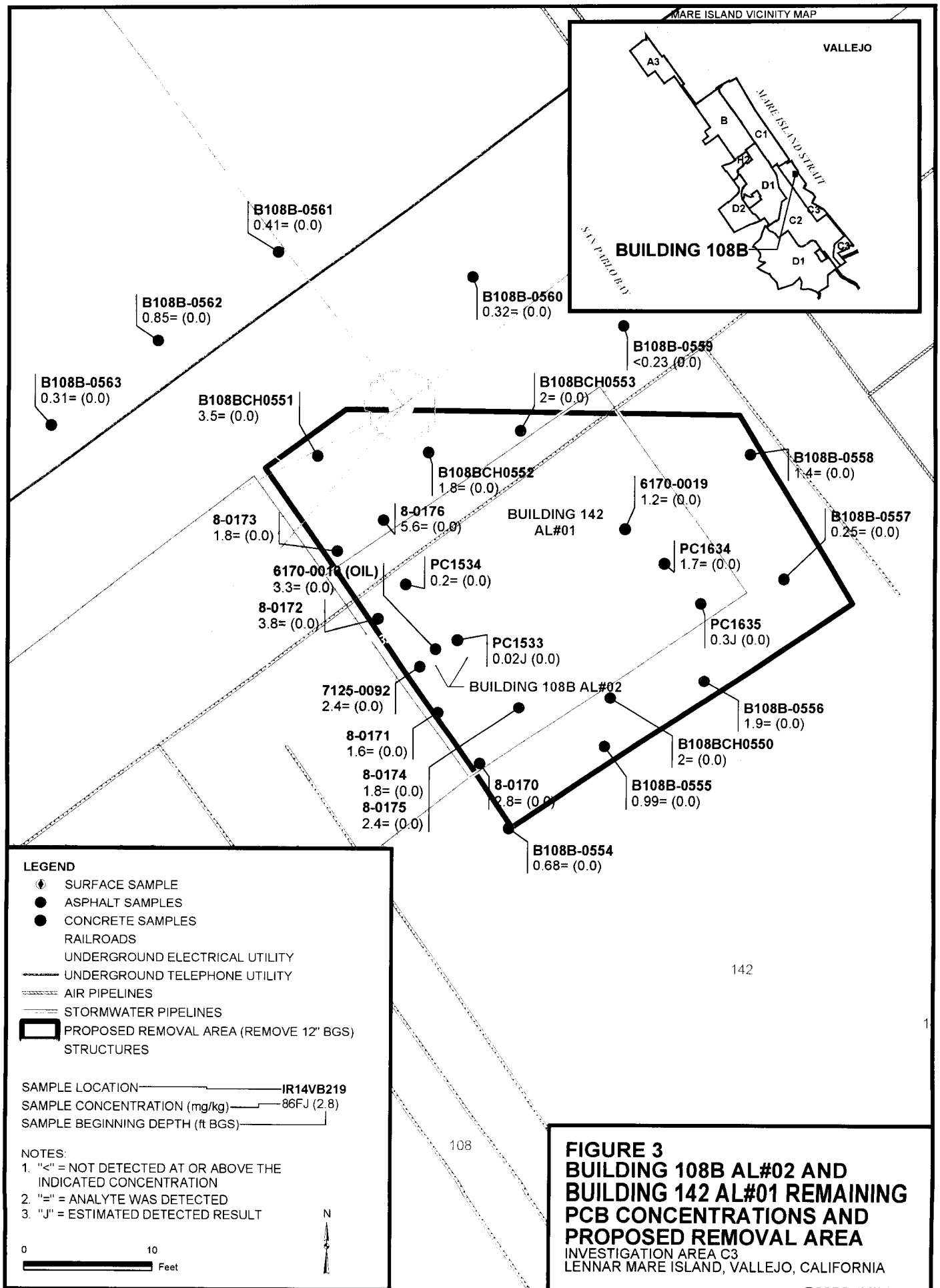

FIGURE 3
BUILDING 108B AL#02 AND BUILDING 142 AL#01 REMAINING PCB CONCENTRATIONS AND PROPOSED REMOVAL AREA

INVESTIGATION AREA C3
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

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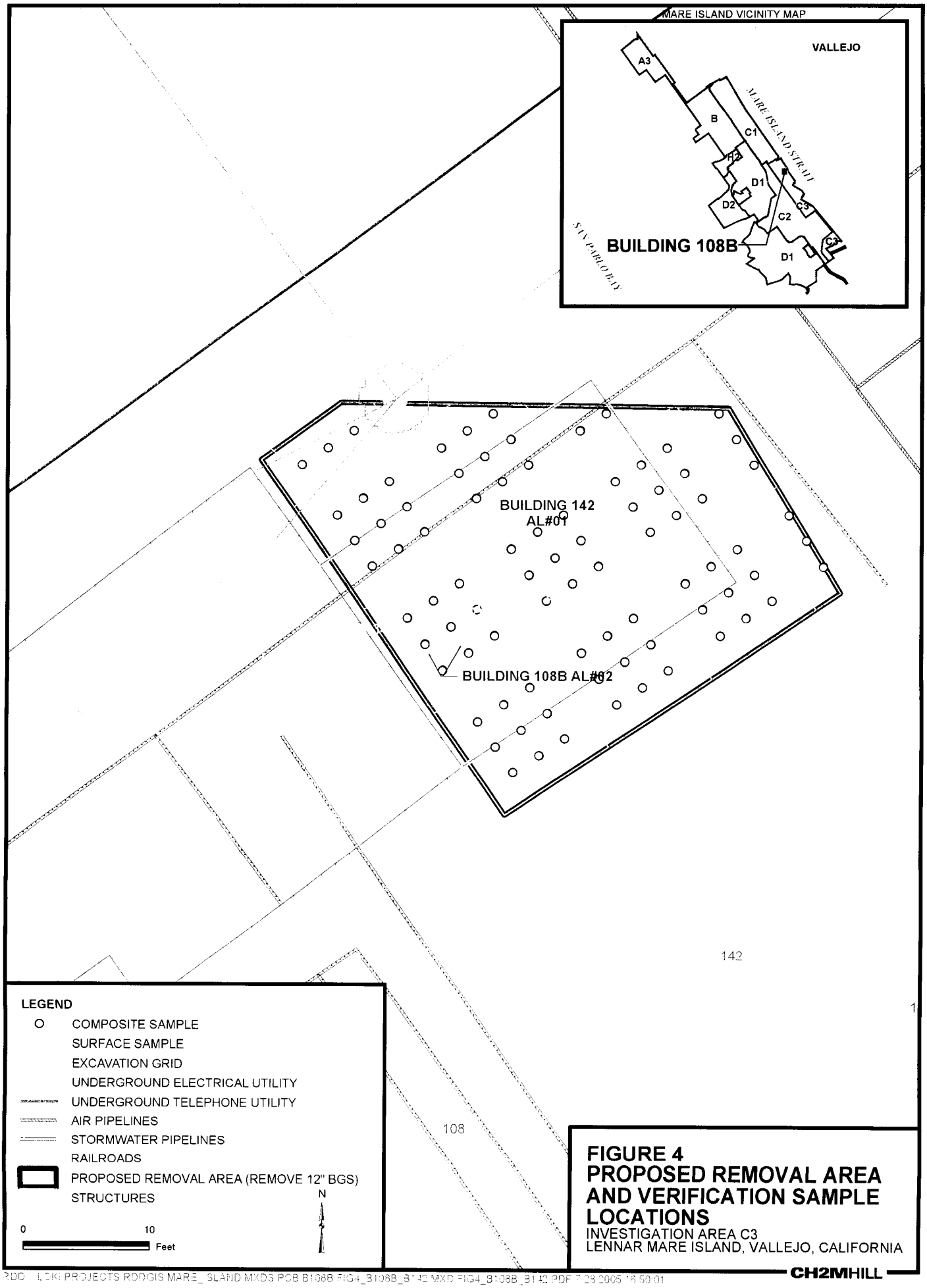

FIGURE 4
PROPOSED REMOVAL AREA AND VERIFICATION SAMPLE LOCATIONS
INVESTIGATION AREA C3
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

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